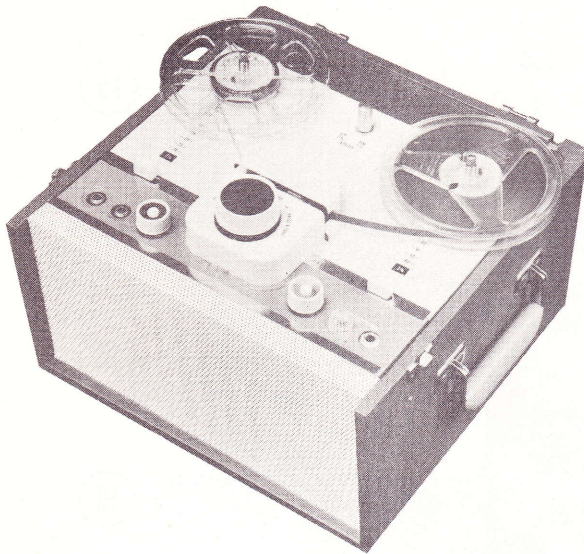
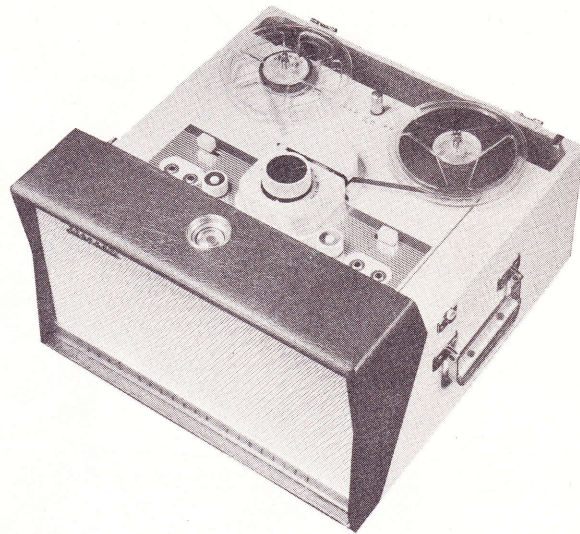




CRESCENT
MODELS TR-672, TR-673



TR - 672



TR - 673

CRESCENT
MODELS TR-672, TR-673

GENERAL INFORMATION

The Crescent Models TR-672 and TR-673 are mechanically alike. The major difference between the two models is the amplifiers used. Notice the difference in the schematic located toward the rear of this manual.

Models TR-672 and TR-673 are designed to record and playback two tracks of material on standard width recording tape, which doubles the recording and playing time with no loss of frequency response or quality. Recordings can be made from a radio, television receiver, or phonograph, in addition to those made directly from the microphone.

These recorders have two tape speeds, 3 3/4" and 7 1/2" per second. Using both tracks, the recording time is as follows:

Reel Size	3 3/4" Speed	7 1/2" Speed
5" (600 ft.)	1 hour	1/2 hour
7" (1200 ft.)	2 hours	1 hour

Models TR-672 and TR-673 are designed to operate on 60 cycles, 110-120 volts, AC supply only. Before connecting to your line supply, be absolutely certain that it agrees with the above specifications.

Manufactured by:

Crescent Industries, Inc.
5900 W. Touhy
Chicago 31, Illinois

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HOWARD W. SAMS & CO., INC., INDIANAPOLIS, INDIANA

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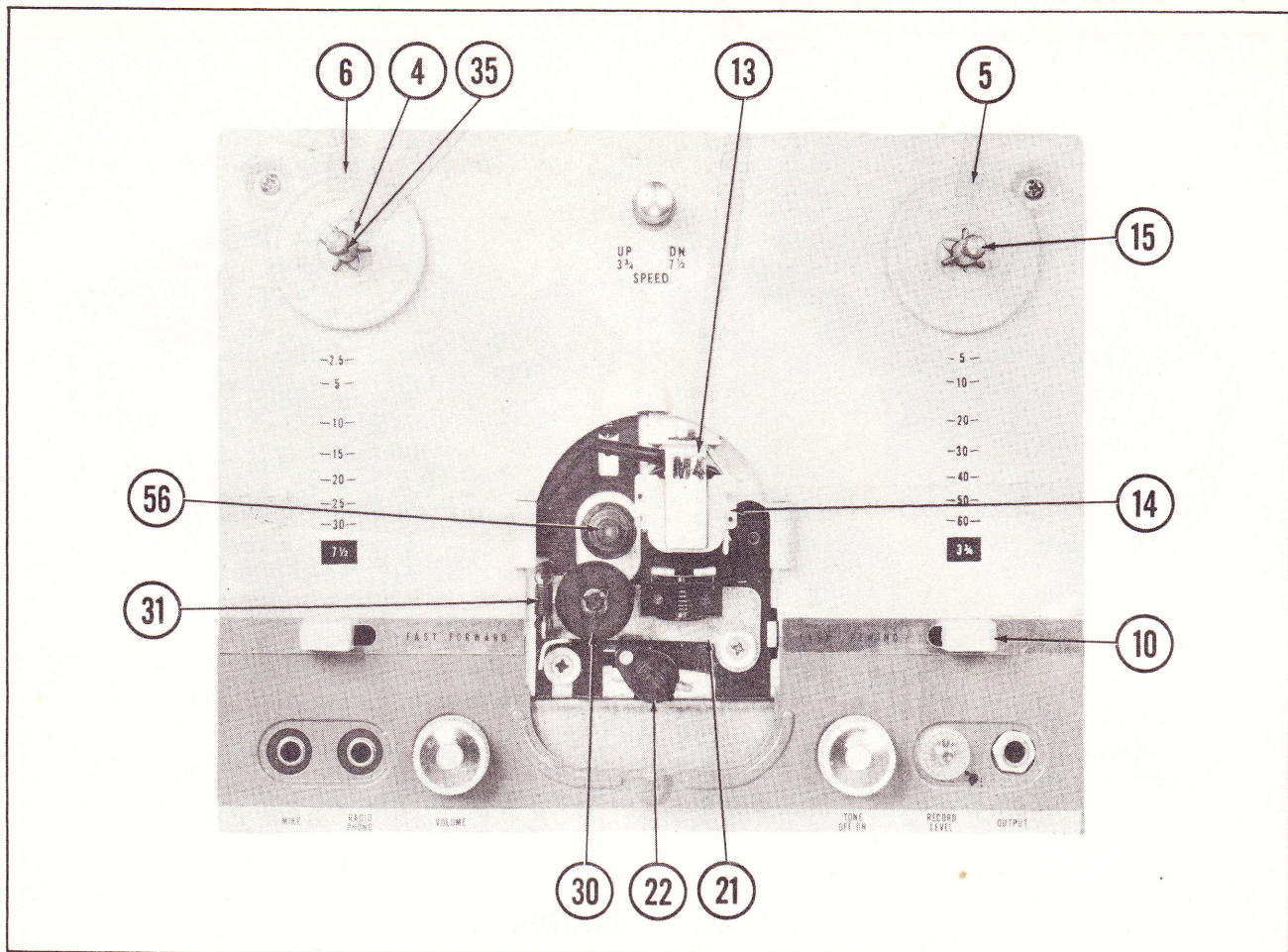


FIGURE 1

SPECIFICATIONS

Fast Forward Speed-

5" reel, 45 seconds
7" reel, 90 seconds

Fast Rewind Speed-

5" reel, 45 seconds
7" reel, 90 seconds

Frequency Response

3 3/4" speed, 65 to 6000 cycle per second.
7 1/2" speed, 65 to 8500 cycle per second.

Power Output-

2 watts undistorted
3 watts maximum

Inputs-

Microphone, 1 Meg Impedance
Radio-Phono, .5 Meg Impedance

Bias & Erase Frequency-

50KC

OPERATING INSTRUCTIONS

Speed Control-

Changing speeds is accomplished by placing the speed button in the "Up" or "Down" position. "Up" for 3 3/4" per second and "Down" for 7 1/2" per second.

CAUTION: Do not operate in this control unless the On-Off control is in the "On" position.

Threading The Tape-

1. Place a reel of tape on the right reel plate (5) and an empty reel on the left reel plate (6) making sure the reel slots engage the pins on the reel plates.

2. Unwind about 12" of tape from the reel. Hold a section of the tape straight with both hands and insert the tape in the tape slot making sure the dull coated side faces the rear of the recorder.

3. Insert the free end of the tape into one of the three radial slots in the hub of the empty reel. Turn the reel several turns clockwise, until the tape is secured to the reel and all slack is taken up between reels.

To Record From Microphone-

1. Turn the On-Off-Tone Control clockwise until a click is heard and allow about thirty seconds for the tubes to warm up.

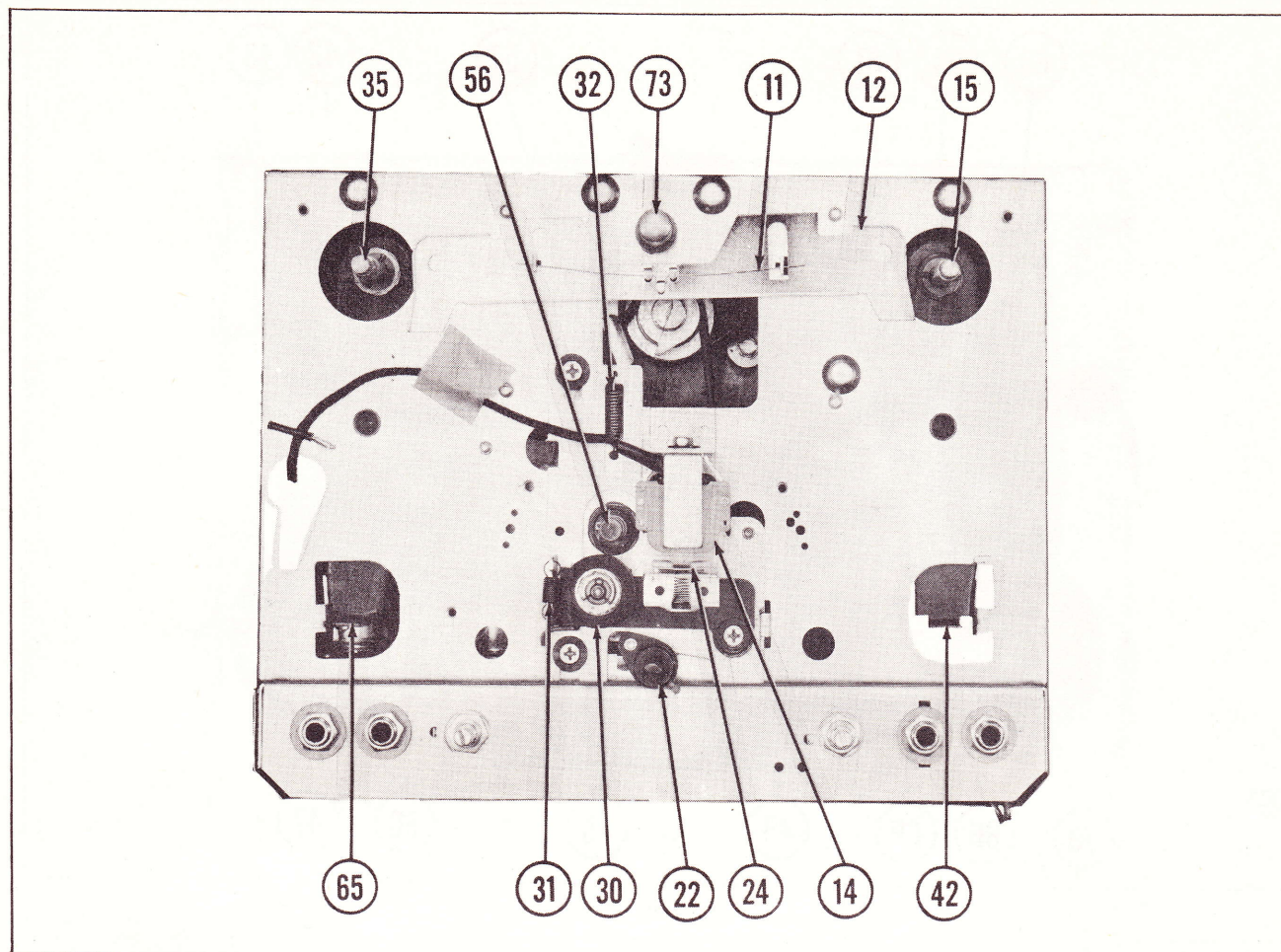


FIGURE 2

2. Insert the microphone plug into the "Mike" jack.

3. Depress the play-record control knob (2) as far as it will go, turn clockwise until it locks while holding it down.

4. Hold the microphone about six inches from your mouth and speak in a normal voice. Adjust the "Volume" control until the record level indicator flashes on the loudest sounds.

NOTE: Model TR673 recording level indicator is a "magic eye" indicator tube. The indicator is located directly in front of the Play-Record Knob. A "V" shaped area on the eye (visible only during recording) marks the volume of sound being recorded. For undistorted reproduction, the tape recorder volume control should be set, while recording, so that the "V" on the indicator tube almost closes for extremely loud passages only. The "V" should never completely close or fold over (Overlap).

To Record From Radio-

Recordings from a radio may be made by one of three ways:

1. Place the microphone about 6" to 12" in front of the radio speaker. Turn the radio volume control to a normal level. Setting it too high will cause dis-

tortion. Turn the radio tone control to maximum treble. Set the recording level and proceed with recording as described under "To Record From Microphone". This type of recording may not be satisfactory as other sounds may be picked up by the microphone which as a result will be recorded on the tape.

2. Have a shielded cable made up with a two conductor phone plug on one end and two alligator clips on the other end. Connect the alligator clips across the voice coil terminals on the radio speaker and insert the cord plug into the "Radio-Phono" jack. Set the radio volume and tone controls as described above. Set the recording level and proceed as described under "To Record From Microphone".

3. Have a shielded cable with a two conductor phone plug on one end and the other end connected across the radio volume control. Insert the phone plug into the "Radio-Phono" jack. Set the recording level and proceed with the recording as described under "To Record From Microphone". The position of the radio volume and tone controls has no effect on this set up and may be set anywhere.

To Record From Phonograph-

1. If the phonograph being used has a phono type plug on the pickup leads, insert it into the "Radio-Phono" jack. Set the recording level and proceed with the recording as described under "To Record From Microphone".

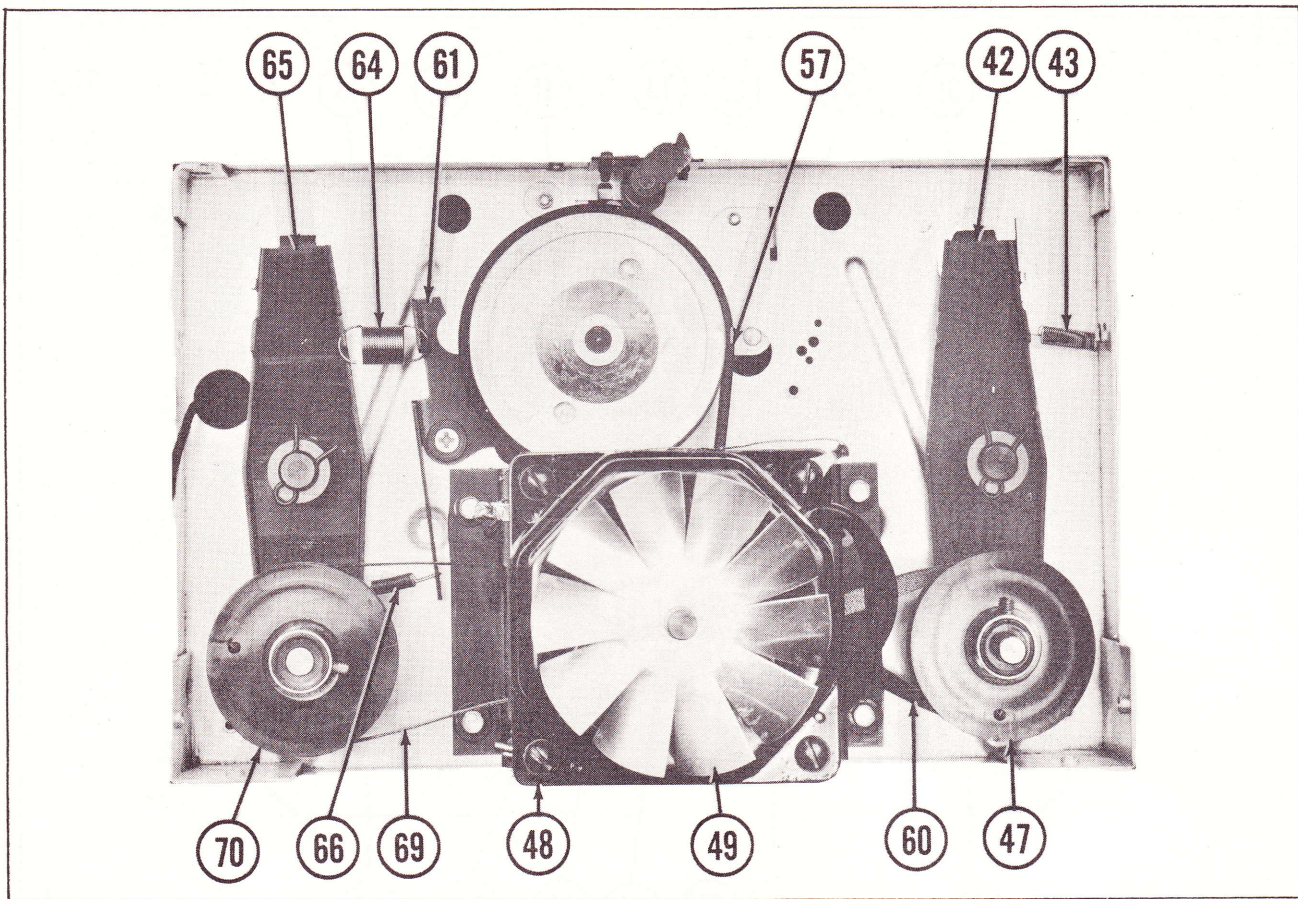


FIGURE 3

To Record From Television Receiver-

1. Use one of the three methods described under "To Record From Radio" and proceed with the recording as described under "To Record From Microphone".

2. If the phonograph has a standard pin type plug which is more common, an adaptor is needed. Insert the pin plug into the adaptor and plug the adaptor into the "Radio-Phono" jack.

IMPORTANT: The recorder will not record from microphone or playback while a plug is inserted in the "Radio-Phono" jack.

Dual Track Recording-

The Crescent is designed so that only one-half the tape width is recorded at a time; thereby resulting in two track recording. This two track operation is accomplished in the following manner:

1. After a reel of tape has been recorded, i. e. all of the tape wound on to the take-up reel, turn the play-record control (2) to idle.

2. Remove the reels from the recorder, turning the full reel over and placing it on the right reel plate (5) and the empty reel on the left reel plate (6).

3. Properly thread the tape and proceed with the recording.

4. After this track has been recorded the first track of recording is ready to be played without re-winding, by reversing the reels as described in Step 2 above.

Fast Forward And Fast Rewind-

High-speed forward or reverse can be obtained by pressing the desired knob (10) toward the head cover. Movement of these controls will wind the tape on the desired reel at a high speed as long as the control is held in this position. These are used primarily in locating a desired portion of a recording in a few seconds.

CAUTION: Do not attempt "Fast Forward" or "Fast Rewind" with the play-record control (2) on anything but idle position, as damage to the unit or breaking of the tape may result.

Braking-

1. The Crescent Tape Recorder contains an automatic brake mechanism (12), which eliminates the necessity for hand braking.

2. To "Stop" tape at anytime — when operating the recorder on fast forward or fast rewind — merely release the forward or rewind control. The tape will automatically come to a stop.

To Play A Recording-

1. Thread tape as described under "Threading the Tape".

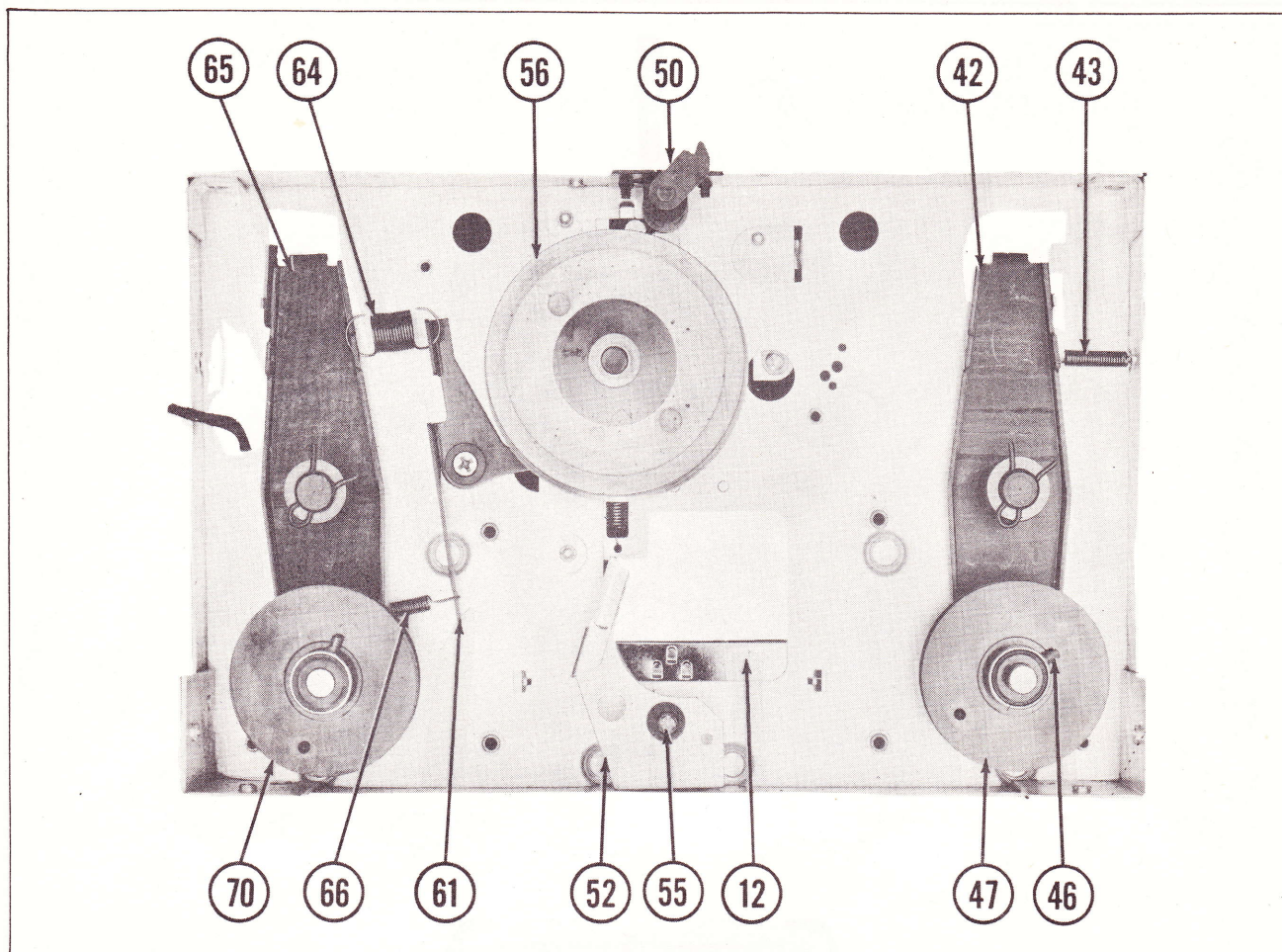


FIGURE 4

2. Turn play-record control (2) clockwise without depressing until it locks.

3. Adjust the "Volume" and "Tone" controls for desired listening level.

To Use An Ext. Speaker-

Plug external speaker thru a three conductor plug into "Output Jack."

CAUTION: Do not connect three conductor plug into output jack without a speaker attached to the plug; as damaged to the output tube transformer and tone control may result.

To Edit And Splice Tape-

NOTE: Since it is impossible to edit and splice one track without affecting the other, recordings which are to be edited should be limited to one track only.

1. The tape may be edited by cutting out unwanted portions, or by joining selections into another sequence. Announcements may be inserted between selections, etc. Unused sections of tape can be spliced together for re-use.

2. For best results, cut tape at a slight diagonal, join ends together with splicing tape on the glossy side and trim off any excessive width.

Erasing Recorded Material-

In the record position any recording on the tape is automatically erased before a new recording is put on the tape. If it is desired to erase a recording without putting anything on the tape follow the normal recording procedure, but leave the "Volume" control set at its extreme counterclockwise position.

To Use As A Public Address System-

1. Insert the microphone plug into the "Radio-Phono" jack.

2. Leave the play-record control (2) in idle position.

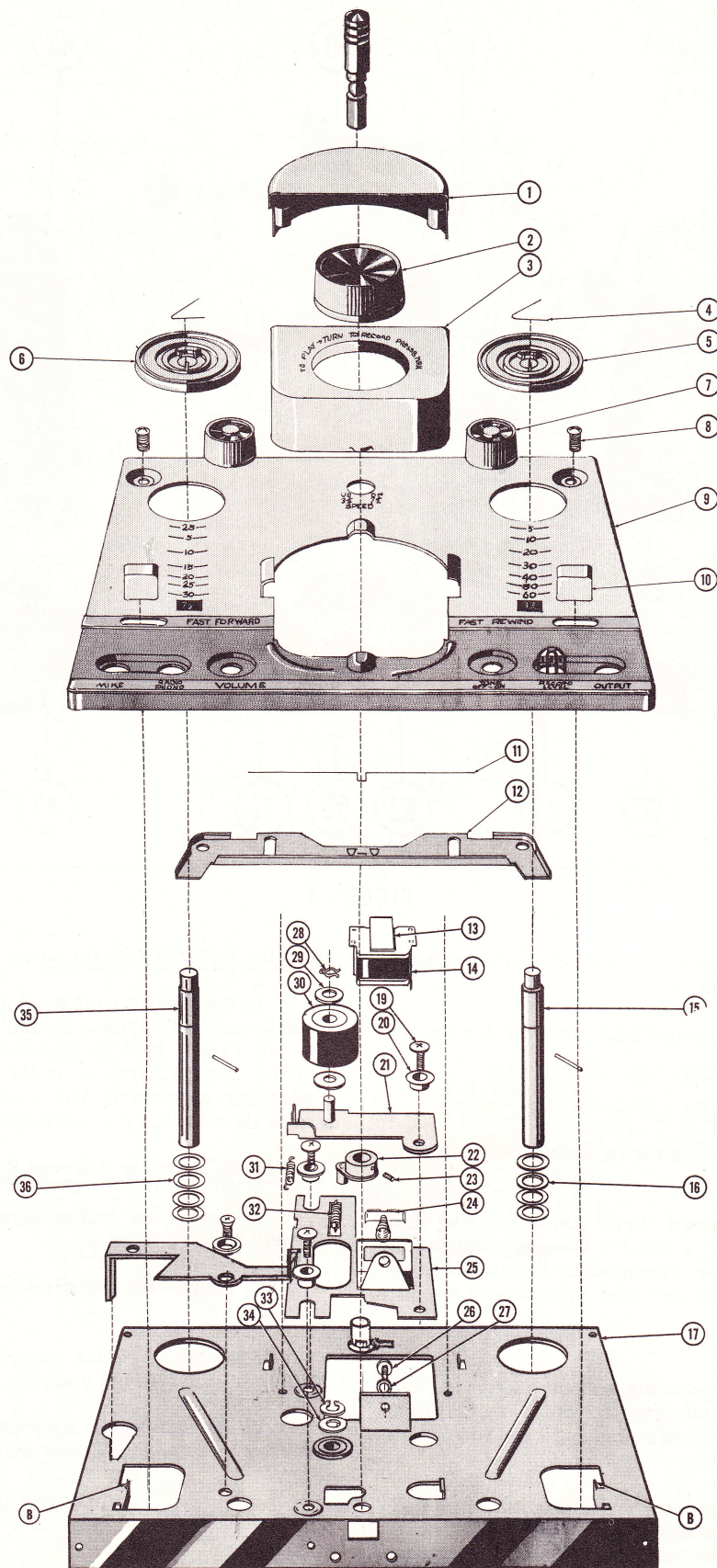
3. Speak into the microphone and adjust the "Volume" and "Tone" controls for desired level.

4. Do not have microphone too close to the speaker or a feedback howl will result.

ADJUSTMENTS

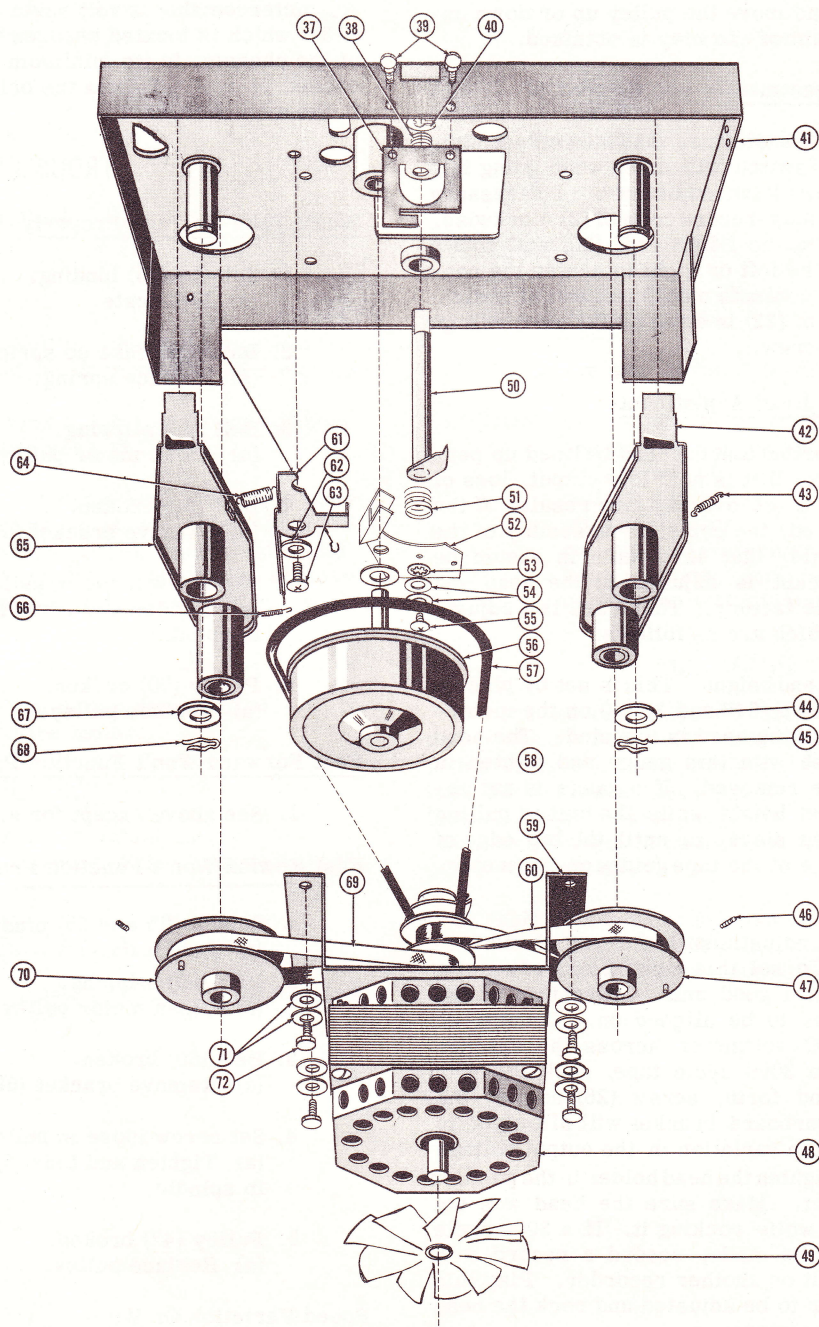
Removing Unit From Case-

All service work except cleaning of the head and pressure roller and adjustment of the head and pressure pad assembly requires removal of the unit from the carrying case.



A PHOTOFAC "EXPLODED" VIEW
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FIGURE 5A. EXPLODED VIEW OF PARTS ABOVE BASEPLATE.



A PHOTOFAC "EXPLODED" VIEW
 © Howard W. Sams & Co., Inc. 1957

FIGURE 5B. EXPLODED VIEW OF PARTS BELOW BASEPLATE.

1. To remove unit from carrying case, remove the four Phillips head screws from bottom of case and carefully lift unit straight up and out.

Spindle (15 and 35) End Play Adjustments-

The spindle should have from 1/32" to 1/16" of up and down movement. Loosen the set screw in the pulley (47 and 70) and move the pulley up or down until the correct amount of end play is obtained.

Lifter Arm (22) Adjustment-

This adjusts the distance that the contact strip on the play-record switch will move when going into the record position. If an adjustment is necessary depress and turn the play-record control (2) clockwise. Loosen set screw in the lifter arm (22) and rotate control knob (2) to the left or right to center the contact strip with the contacts on the left end of switch. Make sure lifter arm (22) is down as far as it will go and tighten its set screw.

Play-Record-Erase Head Adjustment-

It is very important that the head be lined up perfectly with the tape. If it is not, low output, loss of high frequencies or track overlap may result. If the head is to be replaced, the complete assembly of the head and bracket (14) that it mounts in should be changed. The bracket is adjusted to the head and sealed in place at the factory. There are two adjustments to be made which are as follows:

1. One is the head height. This is set by placing a 1.79 gauge (between 11/64" and 3/16") on the motor-board (17) under where the head is mounted. The head is pushed down flush with this gauge and tighten in place and the gauge removed. If a gauge is not obtainable set the head height while the unit is pulling tape. Move the head slowly up until the top edge of the tape is hitting edge of the tape guides on the motor-board.

2. The second adjustment is for output and frequency response. To set this make a recording of a 3000 cycle signal on a good unit. Place this on the unit that the head is to be aligned on. Connect an output meter or AC voltmeter across the speaker voice coil. Play the 3000 cycle tape, rock the head holder (13) back and forth, screw (26) holding the holder on to the motorboard bracket will allow you to do this, and notice the variation in the output voltage at the voice coil. Tighten the head holder in the position of the highest output. Make sure the head was not moved up or down while rocking it. If a 3000 cycle signal tape cannot be made, record a record with some high notes on it on another recorder. Play this back on the recorder to be adjusted and rock the head to give best high note response.

After setting the height and output check recorder for track overlap. To do this take a reel of tape that has no recording on it. Make a recording on the recorder that the head has been adjusted on. Do not rewind but take the reels off, reverse them and play the other track. There should be no sound heard. If what was recorded is heard backwards there is track overlap. If this is the case, the guide on the head holder should be bent up to move the track further apart.

If tube V1 or V2 is replaced or the head changed the setting of the hum balance pot (R3) should be checked. To do this, connect an external speaker to the unit as described under "To Use An External Speaker". Connect an AC voltmeter with a .1volt AC scale across the speaker voice coil. Turn the "Volume" and "Tone" controls clockwise. Place the play-record control (2) in "Play" position. Put the AC meter on the .1 volt scale and adjust the hum pot (R3), which is located between tubes V1 and V2 on top of the chassis, to its minimum reading. It should not exceed .1 volt. This is the only adjustment required in the amplifier.

TROUBLES

Won't Take Up Tape Properly-

1. Spindle (35) binding.
(a) Lubricate.
2. Improper take up spring (64).
(a) Replace spring.
3. Belt (69) slipping.
(a) Clean motor pulley and pulley (70).
4. Belt (69) broken.
(a) Remove bracket (59) and replace belt.
5. Set screw loose in pulley (70).
(a) Tighten and leave 1/32" to 1/16" end play in spindle.
6. Pulley (70) broken.
(a) Replace pulley.

Fast Forward Won't Function Properly-

1. See above except for step 2.

Fast Rewind Won't Function Properly-

1. Spindle (15 and 35) binding.
(a) Lubricate.
2. Belt (60) slipping.
(a) Clean motor pulley and pulley (47).
3. Belt (60) broken.
(a) Remove bracket (59) and replace belt.
4. Set screw loose in pulley (47).
(a) Tighten and leave 1/32" to 1/16" end play in spindle.
5. Pulley (47) broken.
(a) Replace pulley.

Speed Variation Or Wow-

1. Slippage.
(a) Clean motor pulley, flywheel and capstan (56) and pressure roller (30) with a petroleum solvent, not carbon tetrachloride. Replace rubber rollers if they appear oil soaked.
2. Flat spot on rubber roller (30).
(a) A rapid thumping sound while the unit is running may indicate a flat spot on the rubber tire. If this condition does not clear up after several minutes of running time, replace the roller.

(b) If the surface of the rubber roller is not smooth and even, replace the part.

(c) Should the bearings of the roller show signs of excessive wear or be extremely wobbly, the roller should be replaced.

3. Tight feed or take up spindle (15 or 35).
 - (a) Check adjustment as described under "Spindle End Play Adjustment".
 - (b) Lubricate.
4. Tight pressure roller (30).
 - (a) Lubricate
5. Tight flywheel shaft (56).
 - (a) Lubricate.

Stalling Or Binding-

1. Speed control setting changed while unit not turned on. This should be done only when motor is running.

- (a) With motor turned "On", try moving speed control up and down several times.

Should the above fail, try holding the fastforward control (10) to the left as far as it will go and with the other hand manually rotate take-up reel spindle (35). If binding still continues it will be necessary to remove unit from case and free any binding action.

Speed Does Not Agree With Speed Setting-

1. Broken "ears" on motor drive pulley.
 - (a) Replace entire motor.

Tape Creeps Out Of Tape Slot-

1. Head (14) improperly adjusted.
 - (a) See "Play-Record-Erase Head Adjustment".

LUBRICATION

The lubricant applied at time of manufacture

should be sufficient for a long period of time. Approximately once a year, or in the event that parts are replaced, lubricate the unit as follows:

With No. 20 Motor Oil-

1. Take up reel arm (65) bushing.
2. Feed reel arm (42) bushing.
3. Spindle (15 and 35) bearings.
4. Flywheel (56) bearings.
5. Pressure roller (30) bearing.

With Stapt No. 312 Grease Or Lubriplate-

1. Pressure plate (25) at the slide buttons and the guide on the right side.
2. On the stud of the lifter arm (22).

CAUTION: Do not oil the motor bearings unless absolutely necessary as excess oil will only be thrown off and cause slipping of the pulleys and rollers. Always use as little oil as possible. If oil should get on the pulleys and rollers wipe off with a petroleum solvent, such as alcohol. Do not use carbon tetrachloride.

CLEANING

The record-playback head (14), capstan shaft and pressure roller (30) are subject to an accumulation of tape coating residue, which is worn off the tape as it passes these parts. This can cause distortion, weak output and poor erasure. Use a soft cloth and alcohol to clean the head surfaces, capstan and pressure roller.

CAUTION: Do not use a brush or any metallic object when cleaning the record-playback head as this could possibly mar the head surface.

PARTS LIST AND DESCRIPTIONS TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	Mixer & Playback Preamp.	12AU7A	
V2	AF Amplifier	12AX7	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		CRESCENT PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	REPLACEMENT DATA		
	CAP.	VOLT.				MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	.40	300	770088	AFH4-47	B0450	F2P17.87	TMT-23	D-130
C1B	.40	300			BR4035	TC78		FM-450
C1C	.40	300						
C2	25	25	770003	PRS25V25	BBR25-25	TC26	TD-25-25	FM-0225
								TVA-1205

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		CRESCENT PART No.	AEROVOX PART No.	CENTRALAB PART No.	REPLACEMENT DATA			NOTES
	CAP.	VOLT.				CORNELL-DUBILIER PART No.	ERE PART No.	MALLORY PART No.	
C3	20000			BPD-02	DD-203	K085	ED-02		5HK-S2
C4	20000			BPD-02	DD-203	K085	ED-02		5HK-S2
C5	470								
C6	10000								
C7	750								
C8	20000			BPD-02	DD-203	K085	ED-02		5HK-S2
C9	470								
C10	75			BPD-000088	DD-750	G089	ED-75	UC-5475	5GA-Q75
C11	470			BPD-00047	DD-470	G089	ED-470	UC-5347	5GA-T47
C12	2000			BPD-002	DD-202	K072	ED-002	DC-522	5HK-002
C13	2000			BPD-002	DD-202	K072	ED-002	DC-522	5HK-002
C14	3000			1A67-003					MS-23
C15	470			BPD-00047	DD-470	G080	ED-470	UC-5347	5GA-T47
C16	20000			BPD-02	DD-203	G089	ED-02	UC-5475	5HK-S2
C17	75	400		BPD-000088	DD-750	G089	ED-75	UC-5475	5GA-Q75
C18	.01	400		BPD-01	DD-103	CUBASI	ED-01	GEM-411	4TM-S1
C19	.01	400		BPD-01	DD-103	CUBASI	ED-01	GEM-411	4TM-S1

CONTROLS

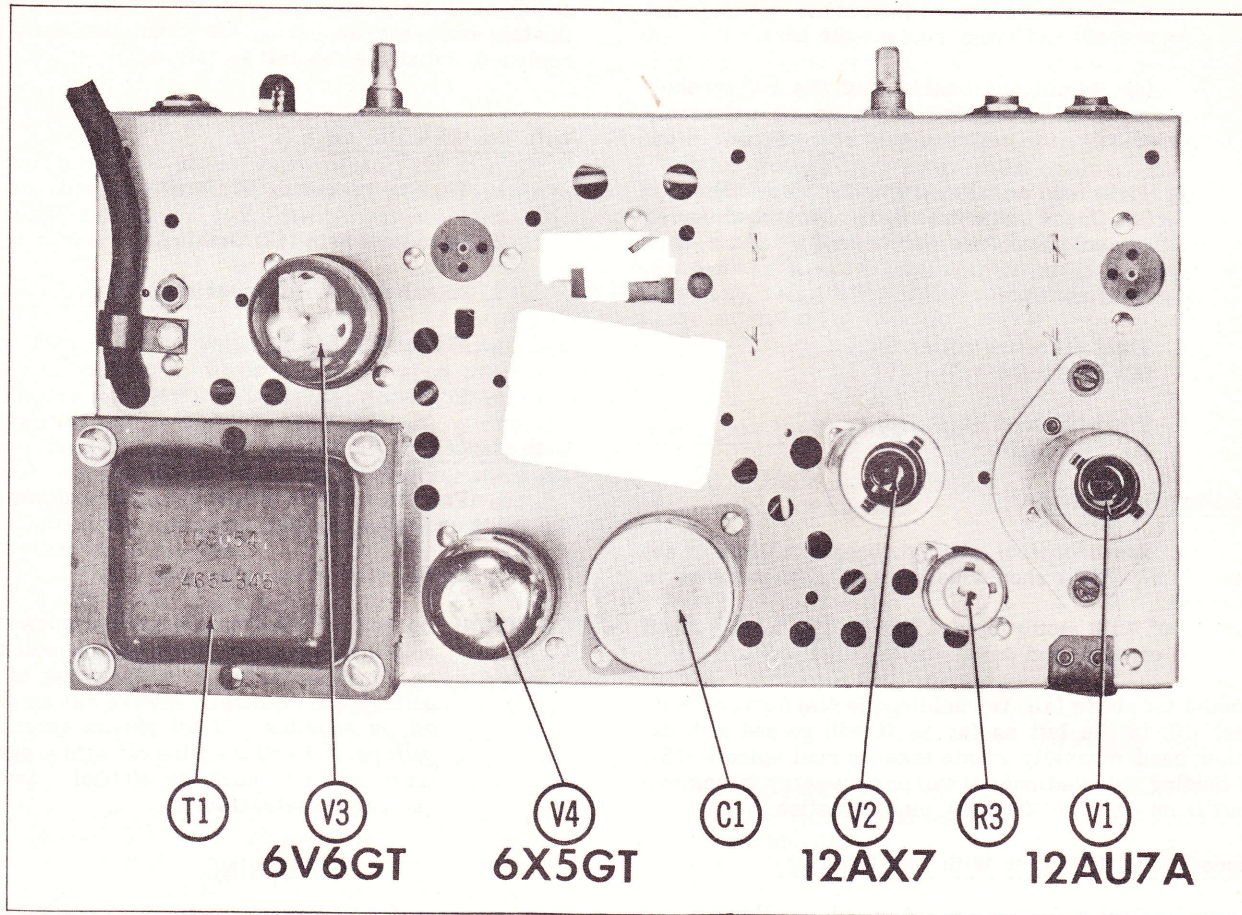
ITEM No.	RATING		CRESCENT PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
	RESIST. ANCE	WATTS						
R1A	500K	1/2	740051	AP-60	A47-500K-Z	Q3-133	U48	Volume
R2A	500K	1/2	740052	AK-4	A47-500K-Z	Q3-133	U48	Tone
R3A	200Ω	2	740045	AK-4	A47-500K-Z	Q3-133	U48	Hum Balance Wirewound

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		CRESCENT PART No.	CENTRALAB PART No.	IRC PART No.	NOTES
	OHMS	WATT				
R4	1Meg			BTS-1Meg	BTS-220K	
R5	470K			BTS-470K	BTS-100K	
R6	220K			BTS-220K	BTS-2200	
R7	4700Ω			BTS-4700	BTA-270	
R8	470K			BTS-470K	BTS-560K	
R9	220K			BTS-220K	BTS-2.2Meg	
R10	4700Ω			BTS-4700	BTS-15K	
R11	150K			BTS-150K	BTS-10K	
R12	68K			BTS-68K	BTS-47K	
R13	270K			BTS-270K	BTS-1Meg	
R14	100K			BTS-100K	BTS-470K	
R15	1500Ω			BTS-1500	PW7-1000	

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

COILS

ITEM No.	USE	REPLACEMENT DATA			NOTES
		CRESCENT PART No.	MEISSNER PART No.	MILLER PART No.	
L1	Bias Oscillator				

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	CRESCENT PART No.	Stancor PART No.	Merit PART No.	Triad PART No.
T1	117V AC ③ 78A	510V CT ④ .040A	6.3V ④ 1.7A		700054	P9205 ① ②	P-3048	PM-8403 ① ② R-850 ②

① Tape 5V Winding;
② Tape Center Tap On 6.3V Winding.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA				NOTES
		CRESCENT PART No.	Heildorson PART No.	Merit PART No.	Stancor PART No.	
T2	5.6KΩ 3-4Ω	700055	Z1003 ① ②	A-2830	A-3877	24S51 S-3X ① Drill one new mtg. hole. ② Use secondary lugs 1 & 3

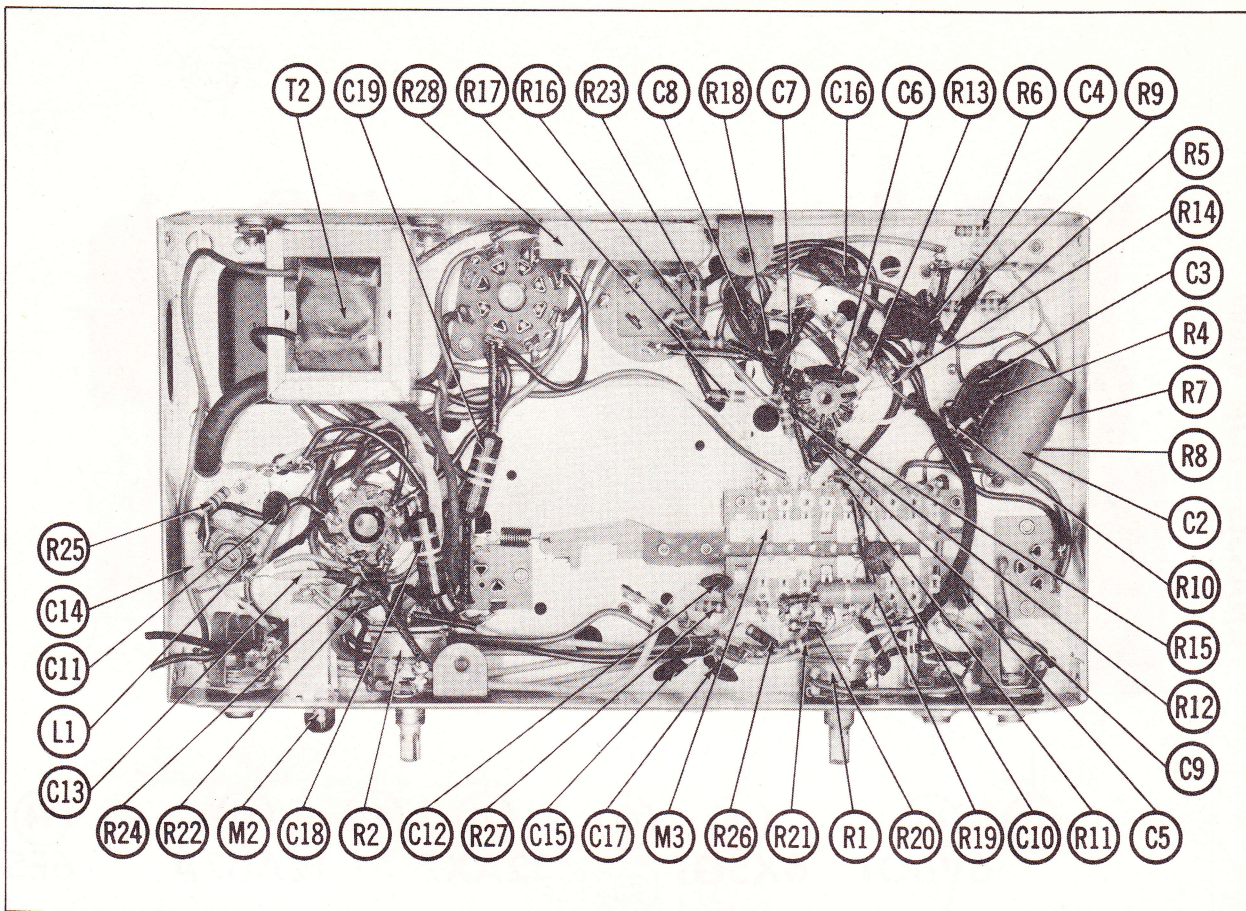
SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		CRESCENT PART No.	QUAM PART No.	
SP1	5 1/4" PM 3-4Ω	011298	52A1	

MISCELLANEOUS

ITEM No.	PART NAME	CRESCENT PART No.	NOTES
M1	Head	011311	Record-Erase, Includes Head Holder, Cable And Plug
M2	Lamp	730006	Neon NE51
M3	Switch	011326	Record-Play (2 Position - Slide Type)
M4	Motor	310371	Record-Play
	Knob	310354	On-Off-Volume, Tone
	Knob	310358	Fast Forward, Rewind

CHASSIS—BOTTOM VIEW



CRESCENT
MODELS TR-672, TR-673

PARTS LIST AND DESCRIPTIONS TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	Mike & Playback Preamp.	12AU7A	
V2	AF Amplifier	12AX7	
V3	Output Bias Oscillator	6V6GT	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA			
	CAP.	VOLT.	CRESCENT PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.
C1A-40	300		770088	AFH4-47	E0450	FD217-87
C1B-40	300				BR4035	TC76
C2-25	25		77003	PRS25V25	BBR25-25	TC26

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	CAP.	VOLT.	CRESCENT PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	
C3	20000			BPD-02	DD-203	K085	
C4	20000			BPD-02	DD-203	K085	
C5	470			BPD-01	ED-01	K082	
C6	10000			BPD-02	DD-203	K085	
C7	750			BPD-02	DD-203	K085	
C8	20000			BPD-02	DD-203	K085	
C9	470			BPD-02	DD-203	K085	
C10	470			BPD-02	DD-203	K085	
C11	39			BPD-02	DD-203	K085	
C12	470			BPD-02	DD-203	K085	
C13	20000			BPD-02	DD-203	K085	
C14	2000			BPD-02	DD-203	K072	
C15	2000			BPD-02	DD-203	K072	
C16	1000			BPD-02	DD-203	K072	
C17	470			BPD-02	DD-203	K085	
C18	20000			BPD-02	DD-203	K085	
C19	10000			BPD-01	DD-103	K082	
C20	10000			BPD-01	DD-103	K082	

Note #1. Some versions may use a 3000MMF in this application.

CONTROLS

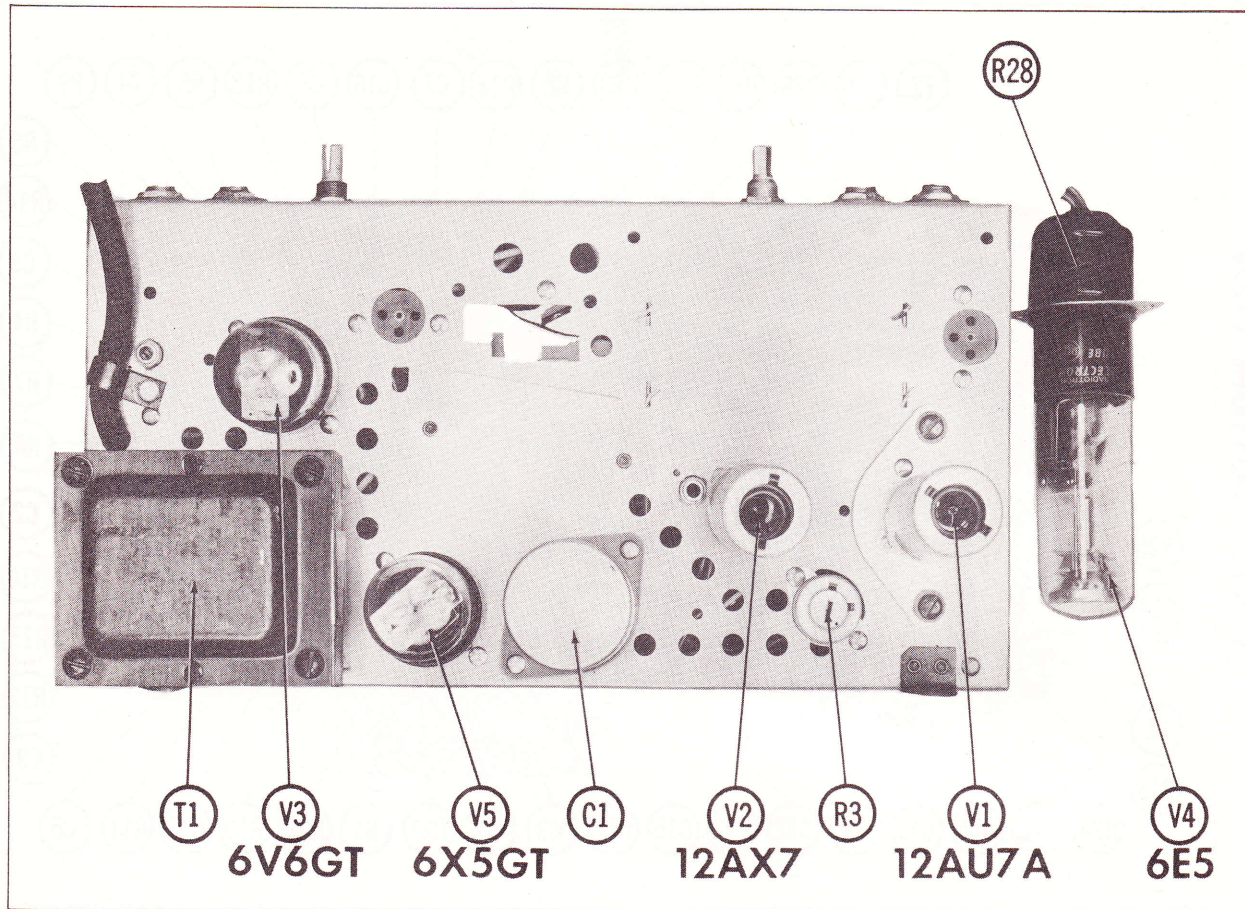
ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	CRESCENT PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	
R1A	500K	1/2	740051	AB-60	A47-500K-Z	Q3-133	Volume
R1B	500K	1/2	740052	AK-4	XSS-3	Q3-133	Tone
R2A	500K	1/2	740052	AK-4	A47-500K-Z	Q3-133	Tone
R2B	500K	1/2	740052	AK-4	XSS-3	Q3-133	Tone
R3A	200Ω	2		KB-1	SWE-12	78-1	Hum Balance

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	OHMS	WATT	CRESCENT PART No.	CENTRALAB PART No.	IRC PART No.	CRESCENT PART No.	
R4	1Meg						
R5	220K						
R6	470K						
R7	47000Ω						
R8	470K						
R9	220K						
R10	47000Ω						
R11	150K						
R12	68K						
R13	270K						

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING			REPLACEMENT DATA			NOTES
	OHMS	WATT		PART No.	IRC PART No.		
R24	2.2Meg			BTS-2.2Meg		Note 1	
R25	220K			BTS-220K			
R26	2.2Meg			BTS-2.2Meg		Note 1	
R27	1Meg			1000Ω		7	BTS-1Meg BTS-1Meg PW7-1000
R28	1Meg						
R29	1000Ω						

Note #1. A 2Meg @ 1/2 W Resistor Used In Some Versions.

COILS

ITEM No.	USE	REPLACEMENT DATA			NOTES
		CRESCENT PART No.	MEISSNER PART No.	MILLER PART No.	
L1	Bias Osc.				
L2	50KC Trap				

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA		
	PRI	SEC. 1	SEC. 2	SEC. 3	CRESCENT PART No.	Triad PART No.
T1	117VAC 500CT ② 1.89A	6.3V 500CT ② .048A	1.95A		70069	22R0K1 R-8B ① ②

① Tape 3V Winding.

② Tape Center Tap On 6.3V Winding.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE			REPLACEMENT DATA			NOTES
	PRI	SEC.		CRESCENT PART No.	Merit PART No.	Stancor PART No.	
T2	5KΩ	3-40 tap @ 2Ω		70007L			

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		SIZE	FIELD	QUAM PART No.	
SP1	6"	PM	3-40	011701 ① ②	① Connect in parallel & phase.
SP2	6"	PM	3-40	011701 ① ②	

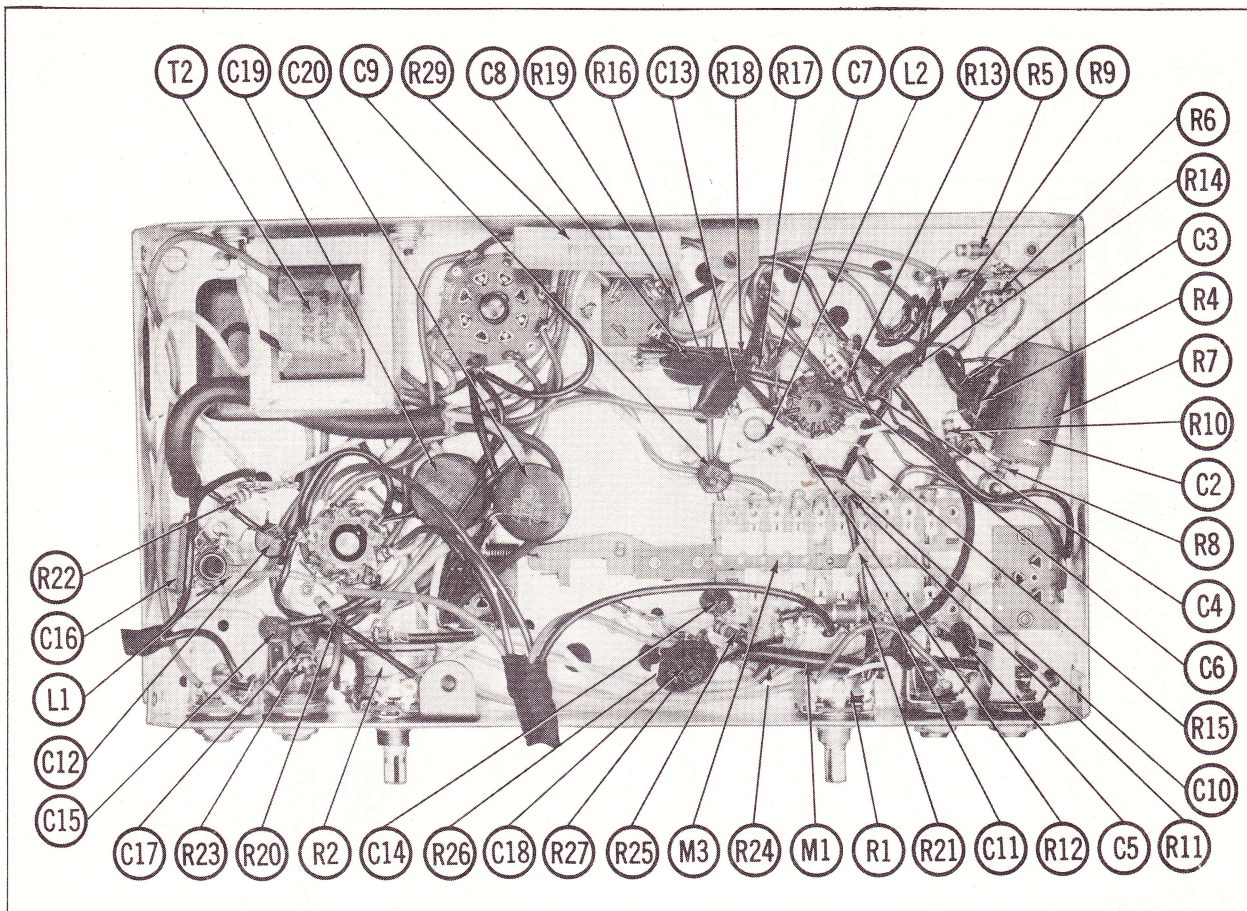
SELENIUM DIODES

ITEM No.	RATING	CURRENT	REPLACEMENT DATA			NOTES
			CRESCENT PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	
M1					ITT	Bias Rectifier, Record Level Indicator

MISCELLANEOUS

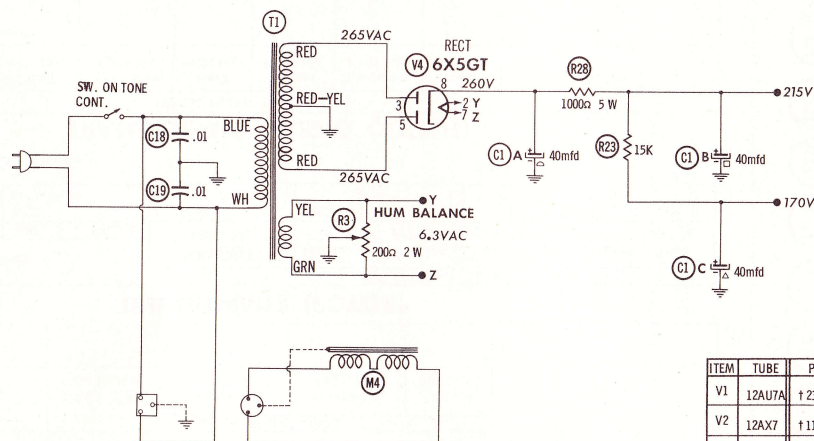
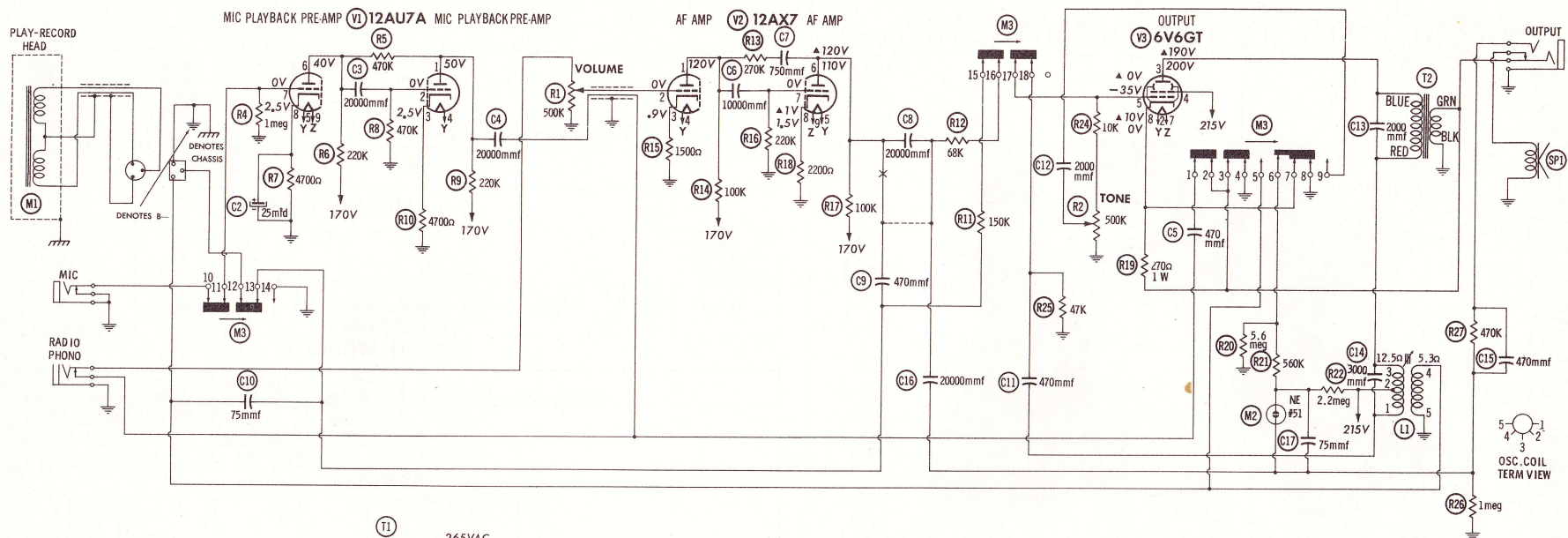
ITEM No.	PART NAME	CRESCENT PART No.	REPLACEMENT DATA			NOTES
			CRESCENT PART No.	MALLORY PART No.	RADIO RECEPTOR PART No.	
M2	Head	011311				Record Erase - Includes Head Holder, Cable And Plug
M3	Switch					
M4	Motor	011326				Record - Playback (2 Position - Slide Type)
	Knob	310372				Play Record
	Knob	310355				On-Off Volume, Tone
	Knob	310357				Fast Forward, Rewind

CHASSIS—BOTTOM VIEW



MODELS TR-672, TR-673

CRESCENT

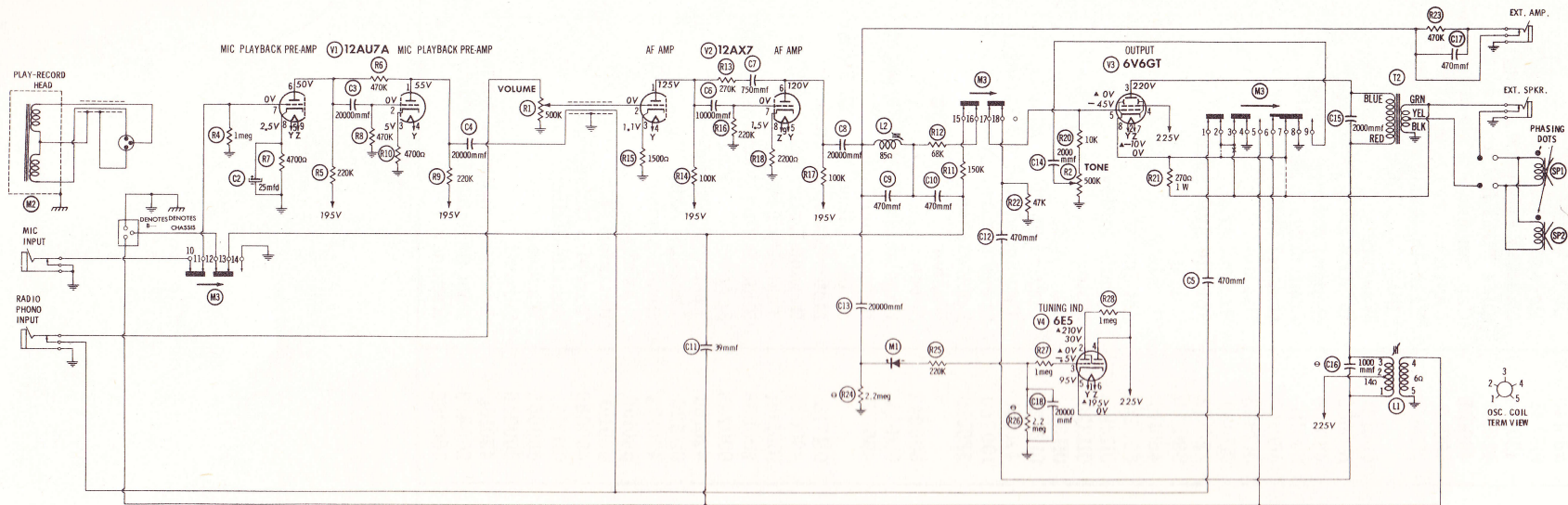


1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AU7A	† 235K	470K	4700 Ω	34 Ω	34 Ω	† 235K	0 Ω	4700 Ω	34 Ω
V2	12AX7	† 115K	0 Ω	1500 Ω	34 Ω	34 Ω	† 115K	220K	2200 Ω	34 Ω
V3	6V6GT	TP	34 Ω	† 1200 Ω	† 1000 Ω	† 570K	TP	34 Ω	0 Ω	† 270 Ω
V4	6X5GT	TP	34 Ω	450 Ω	TP	500 Ω	NC	34 Ω	100K	

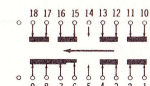
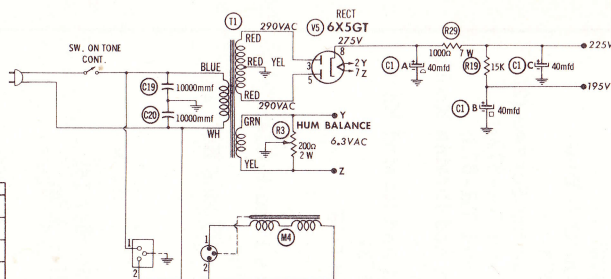
† MEASURED FROM PIN 8 OF V4.
ALL MEASUREMENTS TAKEN IN RECORD POSITION UNLESS OTHERWISE NOTED.
▲ TAKEN IN "PLAY" POSITION.



1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance in component values makes possible a variation of $\pm 1\%$ in voltage and resistance readings.
6. All controls at maximum, proper output load connected.

RESISTANCE READINGS								
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	12AU7A	1.25K	470K	4700 Ω	46 Ω	46 Ω	1.25K	4700 Ω
V2	12AX7	1.11K	0 Ω	1500 Ω	46 Ω	46 Ω	1.11K	220K
V3	6V6GT	TP	46 Ω	1.400 Ω	1.100 Ω	46 Ω	TP	46 Ω
V4	6ES	46 Ω	1.1Meg	3.3Meg	1.100 Ω	0 Ω	46 Ω	
V5	6X5GT	TP	46 Ω	380 Ω	TP	410 Ω	NC	150K

† ALL MEASUREMENTS TAKE IN "RECORD" POSITION UNLESS OTHERWISE NOTED.
 † MEASURED FROM PIN 8 OF V5.
 ▲ MEASURED IN "PLAY" POSITION.



PLAY-RECORD SW. M3 AS VIEWED FROM CHASSIS BOTTOM, SHOWN IN RECORD POSITION.



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CRESCENT
 MODELS TR-672, TR-673
 SCHEMATIC MODEL TR-673.

MECHANICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	100780-037	Head Cover (Model TR-672)	29	580143	Cloth Washer (2)
	100780-035	Head Cover (Model TR-673)	30	011236	Pressure Roller
2	310371	Play-Record Knob (Model TR-672)	31	420174	Capstan Pressure Spring
	310372	Play-Record Knob (Model TR-673)	32	420171	Slide Plate Return Spring
3	450154	Cover (Model TR-672)	33	460018	Capstan And Flywheel Retainer
	450155	Cover (Model TR-673)	34	580141	Capstan And Flywheel Washer
4	460165	Retainer For Reel Holder (2)	35	011319	Take-Up Spindle; Includes Roll Pin
5	012687	Reel Holder (Rewind) Model TR-672	36	580141	Washer
	012104	Reel Holder (Rewind) Model TR-673	37	100660	Control Shaft Bracket
6	012687	Reel Holder (Take-up) Model TR-672	38	420109	Record Release Spring
	012704	Reel Holder (Take-up) Model TR-673	39	600111	Control Shaft Screw
7	310380	Volume And On-Off-Tone (Model TR-672)	40	460117	Control Shaft Retainer
	310381	Volume And On-Off-Tone (Model TR-673)	41	012383	Baseplate
8	600242	Top Plate Mounting Screws (2)	42	011330	Rewind Arm
9	450151	Top Plate (Model TR-672)	43	420173	Spindle Arm Spring
	450170	Top Plate (Model TR-673)	44	580156	Washer
10	310358	Fast Forward And Rewind Knobs (Model TR-672)	45	460110	Retainer
	310357	Fast Forward And Rewind Knobs (Model TR-673)	46	600247	Set Screw
11	420177	Brake Plate Spring	47	011317	Spindle Pulley
12	100880	Brake Plate	48	011326	Motor
13		Head Holder	49	011321	Fan
14	011311	Head; Includes Head Holder Cable And Plug	50	012324	Control Shaft
15	011319	Feed Spindle, Includes Roll Pin	51	420151	Two Speed Control Spring
16	580141	Washers	52	100760	Speed Control Bracket
17	012383	Baseplate	53	380019	Lockwasher
18	101015	Foot Switch Lever	54		Washer
19	600243	Screw (4)	55	600242	Screw
20	200288	Slide Button Washer (4)	56	011694	Capstan Shaft And Flywheel
21	012328	Pressure Roller Arm	57	490087	Rubber Belt
22	012330	Pusher Stud	58		Motor Pulley (Part Of Motor)
23	600247	Set Screw	59	011739	Motor Mounting Bracket
24	011316	Pressure Shoe; Includes Felt Pads	60	490089	Rewind Drive Belt
25	012327	Pressure Plate Assembly	61	100809	Take-Up Lever
26	600137	Screw; Retains Head	62	200288	Slide Button Washer
27	580056	Washer	63	600243	Screw
28	460111	Pressure Roller Retainer	64	420186	Take-Up Spring
			65	011329	Take-Up Arm
			66	420172	Brake Spring
			67	580156	Washer
			68	460110	Retainer
			69	490089	Take-Up Drive Belt
			70	011317	Spindle Pulley
			71	680056	Washers
			72	600256	Screw
			73	420181	Foot Switch Return Spring
			74	200403	Foot Switch Adjust Cam
			75	580082	Retainer